KIM SIN KHEB, [Kim Sin Heb], student biolog.fakul'teta; FAYTEL'BERG, R.Y., nauchnyy rukovoditel', prof.

Absorption of chlorides in the cecum following reduction in the blood supply to the brain in sheep. Pratsi Od.un. Zbir. stud.rob. 149 no.5:173-176 '59. (MIRA 13:4)

1. Odeskiy gosudarstvennyy universitet.
(CHLORIDES IN THE BODY) (BRAIN--BLOOD SUPPLY) (CECUM)

AL'TER, N.A., student biolog.fakul'teta; PASTUSHOK, L.A., student biolog.fakul'teta; FAYTEL'BERG, R.Y., nauchnyy rukoveditel', prof.

Biopotentials of the heart following excitation and inhibition of the central nervous system; effect of bromine and caffeine. Pratsi Od.un. Zbir.stud.rob. 149 no.5:177-181 '59. (MIRA 13:4)

1. Odesskiy gosudarstvennyy universitet.
(NERVOUS SYSTEM) (ELECTROCARDIOGRAPHY)

FAYTEL'BERG-BLANK, V.F.

Change in the absorptive and secretory functions of the stomach in experimental ulcers during the action of high-frequency physical agents on the organism. Pat.fiziol.i eksp.terap. 9 no.4:90 Jl-Ag '65. (MIRA 18:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut kurortologii i fizioterapii (direktor - dotsent F.Ye.Kurkudym; konsul'tant - akademik V.N.Chernigovskiy), Odessa.

FAYTEL'BERG-BLANK, V.R.

P.A.Spiro, an outstanding Russian physiologist. Fiziol.zhur. Mr-Ap '55. (MIRA 9:9)

1. Odes'kiy medichniy institut, Kafedra patologichnoi fiziologii.
(SPIRO, PETR ANTONOVICH, 1844-1893)

FAYTEL'BERG-BLANK, V.R.

Materials on I.M.Sechenov's stay in Odessa. Fiziol.zhur. [Ukr.] 2 no.1:7-11 Ja-F '56. (MLRA 10:1)

1. Odes'kiy medichniy institut imeni M.I.Pirogova, kafedra istorii meditsini.
(SECHENOV, IVAN MIKHAILOVICH, 1829-1905)

FAYTEL'BERG-BLANK, V.R.

USSR/Human and Animal Physiology General Problems T

Abs Jour: Ref Zhur-Biol., No 8, 1958, 36079.

Author : Faytelberg-Blank, V.R., Sosyura, U.B.
Inst :
Title : Absorption of Radio Active Phosphorus from the Pleural Cavity

Orig Pub: Bul. eksperim. biol i meditsiny, 1957, 43, No 3, prilozhenie, 64-68

Abstract: P^{32} in doses of 50 million impulses/1 mm/1 kg of body weight was injected in the pleural cavity of rabbits under manometric control. P^{32} appeared in the blood within 3 minutes, reaching its maximum concentration within 20-30 min. Within 2 hours P^{32} appeared in the liver and the lungs. Artificial pneumonothorax slowed down the initial absorption, but after 2 hours its de-

Card : 1/2

Chair Pathophysiology 4
Odessa State Med. Inst. im N.I. PIROGOV.

USSR/Human and Animal Physiology. General Problems. T

Abs Jour: Ref Zhur-Biol., No 8, 1958, 36079

posit in the lungs and liver proceeded in a greater degree than in control animals The storage of P^{32} is lower in the collapsed lung than in the normal one.

Card : 2/2

FAYTEL'BERG-BLANK, V.R.

Influence of the cetral nervous system on the absorption of radioactive phosphorus from the plyeral cavity [with summary in English]. Ukr.biokhim.zhur. 30 no.4:539-551 '58 (MIRA 11:9)

1. Kafedra fiziologii zhivotnykh Odesskogo sel'skokhozyaystvennogo instituta.
(PLEURA)
(PHOSPHORUS IN THE BODY)
(SLEEP)

FAYTEL'BERG-BLANK, V. P., Cand of Med Sci -- (diss) "Studying the Absorption Capacity of a Pleura for Various States of an Organism With the Aid of Copper Atoms. Stalino, 1959, 26 pp (Stalino Medical Institute im A. M. Gor'kiy) (KL, 7-60, 110)

FAYTEL'BERG-BIANK, V.R. (Makeyevka)

Absorptive capacity of the pleura under conditiones of high environmental temperature. Vrach. delo no.4:389-390 Ap '59. (MIRA 12:7)

1. Nauchnyy rukovoditel' raboty - prof. A.O. Voynar.
(PLEURA) (RADIOISOTOPES--PHYSIOLOGICAL EFFECT)
(HEAT--PHYSIOLOGICAL EFFECT)

MAYTEL'BERG-BLANK, V.R.

Resorption of radioactive phosphorus from the pleural cavity in pleuritis. Fiziol.zhur. [Ukr.] 6 no.2:261-266 Mr-Ap '60. (MIRA 13:7)

1. Odesskiy sel'skokhozyaystvennyy institut, kafedra fiziologii zhivotnykh.

(PHOSPHORUS--ISOTOPES) (PLEURISY)

FAYTEL'BERG-BLANK, V.R.

Effect of the autonomic nervous system on the absorption of radioactive phosphorus from the pleural cavity. Fiziol.zhur. 47 no.3: 325-328 Mr '61. (MIRA 14:5)

1. From the Animal Physiology Chair of the Agricultural Institute, Odessa.

(NERVOUS SYSTEM, AUTONOMIC) (PHOSPHORUS METABOLISM)
(PLEURA)

FAYTEL'BERG-BLANK, V.R.

Effect of ultrasonic waves on the absorptive activity of the stomach and intestines. Fiziol. zhur [Ukr.] 8 no.4:507-512 Jl-Ag '62. (MIRA 18:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut kurortologii i fizioterapii, Odessa.

FAYTEL'BERG-BLANK, V.R., kand.med.nauk (Odessa)

Effect of a UHF electrical field on the absorbtive activity of the stomach and intestines. Vrach.delo no.8:92-94 Ag '62.
(MIRA 15:11)

1. Ukrainskiy institut kurortologii i fizioterapii.
(STOMACH) (INTESTINES) (ELECTROPHYSIOLOGY)

41605
S/021/62/000/010/008/008
D251/D307

27.1/00

AUTHOR: Faytel'berg - Blank, V.R.

TITLE: The effect of centimeter band radio waves on the absorption of amino acids, chlorides and water in the stomach and intestines

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 10, 1962, 1367 - 1370

TEXT: The author states that although therapeutic uses have been found for high-frequency waves, no work has yet been done on the effect of centimeter-band radio waves on the absorptive action of the stomach and intestine. Experiments were conducted on 6 dogs with Pavlov sacs and 3 dogs with an isolated loop of the small intestine to compare the absorption of amino acids, chlorides and water in the natural state and under high frequency radio-waves of the centimeter band. A 50 w radio-wave field was applied for 10 minutes. Experimental details of the apparatus are given. The amino acids were investigated by D.A. Tsuverkalov's method and the chlorides by Rushnyak's modification of Fol'hardt's method. It was

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shown that, although the amount of intensification varied from dog to dog, the radio waves produced a definite intensification of the absorption of amino acids, chlorides and water. There are 3 figures.

ASSOCIATION: Ukrayins'kyy n-d. instytut kurortolohiyi ta fizioterapiyi (Ukrainian s-r. Institute of Natural Medicinal Factors and Physiotherapy)

PRESENTED: by Ye.B. Babs'kyy, Academician

SUBMITTED: February 12, 1962

FAYTEL'BERG-BLANK, V.R.

Effect of centimeter-band radio waves on the absorption of amino acids, chlorides and water in the stomach and intestines. Dop. AN URSR no.10:1367-1370 '62. (MIRA 18:4)

1. Ukrainskiy nauchno-issledovatel'skiy kurortologii i fizioterapii.

FAYTEL'BERG-BLANK, V.R.

Absorptive activity of the stomach and intestine under the influence of ultrahigh frequency electric fields. Fiziol.zhur. 48 no.6:735-741 Je '62. (MIRA 15:8)

1. From the Ukrainian Research Institute of Health Resorts and Physical Therapy, Odessa.
(STOMACH) (INTESTINES) (ELECTRICITY--PHYSIOLOGICAL EFFECT)

L 16606-63 EWP(q)/EWT(m)/BDS AFFTC JD

S/238/63/009/002/002/003

AUTHOR: Faytel'berh-Blank, V. I.

TITLE: Permeability of uninjured skin to radioactive phosphorus and calcium under the influence of galvanic current

PERIODICAL: Fiziolohichnyy zhurnal Akademii nauk UkrSSR, v. 9, No. 2, 1963, 245-250

TEXT: The purpose of the investigation was to study the permeability of uninjured skin under the influence of different density galvanic currents and at different sizes of gaskets with different amounts of ions. The permeability of skin to radioactive calcium and phosphorus was determined without the use of galvanic current, with galvanic current of 0.1, 0.2 and 0.5 ma/cm^2 as well as with doubling the area of gasket. In addition a series of experiments were conducted in which the amount of ions on the gasket were doubled and the direction of current reversed. It was established that $Na_2HP^{32}O_4$ placed on undamaged rabbit skin in the form of aqueous solution penetrates into the organism. The galvanic current increases the permeability of skin to radioactive phosphorus, especially after cessation of the action of galvanic current. The author explains the increase in the permeability of skin to radioactive phosphorus following the galvanic current treatment by the formation of

Card 1/2

L 16606-63

S/238/63/009/002/002/003

Permeability of uninjured ....

chemically active substances in the skin, which react on cell elements and increase their permeability. The increase in the area of the gasket increases permeability of the skin, particularly under the action of galvanic current. Radioactive calcium in the form of $CaCl_2$ does not permeate the skin. Galvanic current does not aid permeability of skin to calcium. There are 4 figures.

ASSOCIATION: Ukrainskyy naukovo-doslidnyy instytut kurortolohii i fizioterapii (Ukrainian Scientific Research Institute of Resorts and Physiotherapy), Odessa

SUBMITTED: January 26, 1961

Card 2/2

FAYTEL'BERG-BLANK, V.R.

Effect of long-wave diathermy on gastric and intestinal absorptive activity. Biul. eksp. biol. i med. 56 no.8:70-74 Ag '63. (MIRA 17:7)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii (direktor - dotsent F.Ye. Kurkudym). Predstavlena deystvitel'nym chlenom AMN SSSR V.N. Chernigovskim.

FAYTEL'BERG-BLANK, V.R.

Mechanism of the action of ultrasonics on the processes of absorption in the gastrointestinal tract. Fiziol. zhur. [Ukr.] 10 no.2:227-235 Mr-Ap '64. (MIRA 18:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut kurortologii i fizioterapii, Odessa.

L 18290-65 Pa-4 AMD
ACCESSION NR: AP4045935 S/0238/64/010/005/0647/0654

AUTHOR: Faytel'berg-Blank, V. R.

B

TITLE: Participation of the central and vegetative nervous systems in the mechanism of ultrasonic action on the absorption processes in the gastrointestinal tract

SOURCE: Fiziologichny*y zhurnal, v. 10, no. 5, 1964, 663-670

TOPIC TAGS: ultrasound, ultrasonic effects, central nervous system, vegetative nervous system, absorption process change, gastrointestinal tract, dog

ABSTRACT: A study was conducted of the participation of the central and vegetative nervous systems in the mechanism of ultrasonic action on the absorption processes in the gastrointestinal tract, a subject not previously discussed in the literature. Six dogs with stomach pouches isolated by Pavlov's method and eight dogs with intestinal loops isolated by Thiry's method were used in the investigations. The functional state of the central nervous system and the reticular formation of the brain were altered by strychnine, chloralhydrate, barbamyl, and aminazine; the vegetative nervous system was altered by atropin, carboxylin, ergotoxin, adrenalin, and proserin. The ganglia were excluded by hexonium. The effect of ultrasonic vibrations on the absorption processes in the gastrointestinal tract was

Card 1/2

L 18290-65

ACCESSION NR: AP4045935

investigated against this background. The investigations showed that the central and vegetative nervous system participate in the mechanism of ultrasonic action on the absorption processes in the gastrointestinal tract. Orig. art. has: 4 figures

ASSOCIATION: Ukrayins'ky*y naukovo-doslidny*y insty*tut kurortologiyi i fizioterapiyi, Odessa (Ukrainian Scientific Research Institute of Health-Resort Science and Physiotherapy)

SUBMITTED: 14Nov63 ENCL: 00 SUB CODE: LS

NO REF SOV: 007 OTHER: 005

Card 2/2

ACCESSION NR: AP4005666 S/0219/64/057/001/0045/0048

AUTHOR: Faytel'berg-Blank, V. R.

TITLE: Effect of high-frequency centimeter waves on the absorptive activity of the stomach and intestines

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny*, v. 57, no. 1, 1964, 45-48

TOPIC TAGS: centimeter wave, glucose absorption, high frequency wave, biological microwave effect

ABSTRACT: The effects of irradiation by centimeter waves on the absorptive capacities of an isolated stomach pouch, filled with 20% glucose for 60 min, and an isolated loop of intestine, filled with 7% glucose for 30 min, were studied. Six dogs were used in 420 experiments. A Luch-58 generator producing 10-cm waves at a frequency of 2407 Mc was used. The epigastric area, the cervical sympathetic-node area, and the left posterior surface of the hip were exposed to doses ranging from 50 to 200 w for 10 or 20 min. Exposure of the epigastric area to 50-w centimeter waves for 10 min

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ACCESSION NR: AP4005666

increased glucose absorption in the stomach from 18.9% to 29.4% and in the intestine, from 62.6 to 72.5%. Similar effects were produced when power was increased to 70 w. At 120 w, glucose absorption in the stomach increased from 18.9% to 37%. When the duration of exposure to the 50-w dose was increased to 20 min, effects on glucose absorption were less pronounced. (Absorption increased in some cases and dropped in others.) Irradiation of the cervical sympathetic-node area and the left posterior surface of the hip resulted in increases in absorption more or less similar to those produced by irradiation of the epigastric area. Irradiation of the epigastric area resulted in a temperature increase of 1.5—2.0C in the stomach and intestine, but irradiation of the other parts of the body resulted in an increase of only 0.8—1.0C. The authors conclude that the effect on the absorptive function of the stomach and the intestine is due to the thermal as well as the oscillatory factors of the centimeter waves. Orig. art. has: 3 figures.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut kurortologii i khimioterapii (Ukrainian Scientific Research Institute of Rest Cures and Chemotherapy)

Card 2/3

ACCESSION NR: AP4048044 S/0020/64/158/006/1459/1462

AUTHOR: Faytel'berg-Blank, V. A.

TITLE: The influence of high-frequency inductothermal currents with different physical characteristics on the absorptive activity of the gastro-intestinal tract

SOURCE: AN SSSR, Doklady*, v. 158, no. 6, 1964, 1459-1462

ABSTRACT: Sections of the stomach and small intestine of 8 dogs were isolated (Pavlov method) in order to study the effects of inductothermy on absorption activity. Stomach sections were placed in a 20% glucose solution for 1 hr and small intestine sections were placed in a 7% solution for 30 min. A DKV-2 generator was used for inductothermy (wavelength - 44 m; 6.78 Mc); it was also operated at a frequency of 13.56 Mc with a 22-m wavelength. The field strength was 160—280 mamp and the duration of exposure was 10 min. Gastric and intestinal absorption was higher at 6.78 Mc (280 mamp) than at 13.56 Mc. Changes in gastrointestinal absorption were also observed at 13.56 and 6.78 Mc (160 mamp) during a 10-min exposure. The author

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ACCESSION NR: AP4048044

feels that changes in absorption depend upon the physical characteristics of the inductothermic agent. The different levels of gastrointestinal resorption at different frequencies may help to explain the thermal and extrathermal effects of high-frequency generators. The explanation of the thermal or oscillatory factor in the mechanism of inductotherm will be the object of further investigations. Orig. art. has: 4 figures.

ASSOCIATION: Ukrainskiy gosudarstvennyy nauchno-issledovatel'skiy institut kurortologii i fizioterapii, Odessa (Ukrainian State Institute of Balneology and Physiotherapy)

SUBMITTED: 03Jan64 ENCL: 00 SUB CODE: LS, EC

NO REF SOV: 013 OTHER: 003

Card 2/2

L 24182-65

ACCESSION NR: AP5004252 S/0021/65/000/001/0113/0116

18
B

AUTHOR: Faytel'berg-Blank, V. R.

TITLE: Role of the CNS and autonomic nervous system in the mechanism of the action of uhf on gastrointestinal absorption processes

SOURCE: AN UkrRSR. Dopovidi, no. 1, 1965, 113-116

TOPIC TAGS: gastrointestinal absorption, uhf, microwave effect, CNS, autonomic nervous system, central nervous system

ABSTRACT: Ten dogs, 5 with their stomachs isolated by means of Pavlov pouches and 5 with an intestinal loop isolated by Thiry's method, were exposed to uhf (2307 Mc) irradiation. Prior to irradiation, changes were induced in the CNS and reticular formation of the experimental animals by the administration of strychnine, chloral hydrate, barbamil, and aminazine, and in the autonomic nervous system by the administration of atropine, carbocholine, argotoxin, adrenalin, and proserine. Hexonium was used to block the intervertebral ganglia. The results are shown in Figs. 1—3 of the Enclosure. The author concludes that the CNS and autonomic nervous system do participate in the mechanism

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L 24182-65

ACCESSION NR: AP5004252

of the effect of uhf on absorption processes in the gastrointestinal tract. Orig. art. has: 3 figures. [DP]

ASSOCIATION: Ukrayins'kyy n.-d. institut kurortologiyi i fizioterapiyi (Ukrainian n.-d. Institute of Natural Medicinal Factors and Physiotherapy)

SUBMITTED: 13Jan64 ENCL: 03 SUB CODE: LS

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Card 2/3

L 24182-65

ACCESSION NR: AP5004252

ENCLOSURE: 01

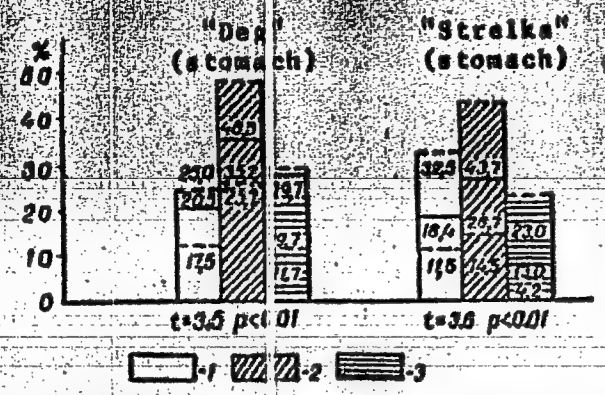

Fig. 1. Effect of uhf on absorption of glucose in the stomach following administration of strychnine

1 - Normal; 2 - following administration of strychnine; 3 - following exposure to uhf.

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L 24182-65

ACCESSION NR: AP5004252

ENCLOSURE: 02

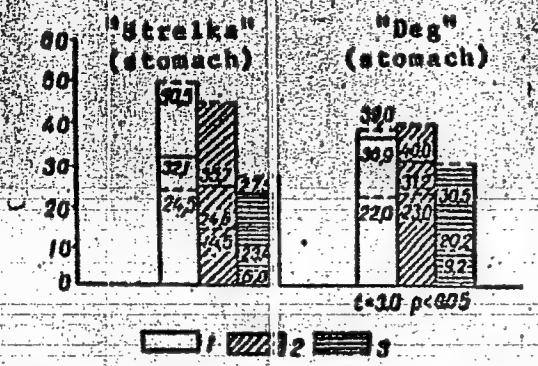

Fig. 2. Effect of uhf on absorption of glucose in the stomach and intestine following administration of chloral hydrate

1 - Normal; 2 - following administration of chloral hydrate; 3 - following exposure to uhf.

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L 21182-65

ACCESSION NR: AP5004252

ENCLOSURE: 03

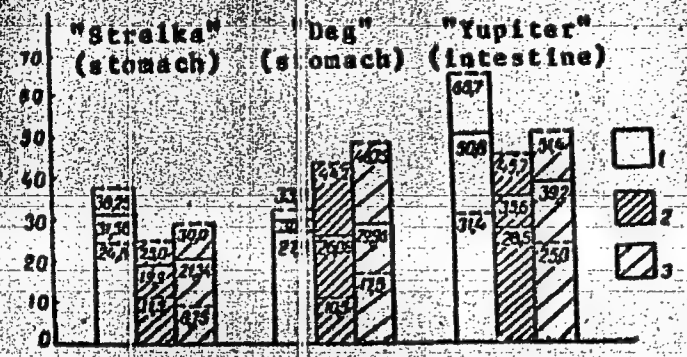

Fig. 3. Effect of uhf on absorption of glucose in the stomach and intestine following administration of argotoxin

1 - Normal; 2 - following administration of argotoxin; 3 - following exposure to uhf.

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FAYTEL'BERG-BLANK, V.R. (Odessa)

Effect of inductotherm on the absorptive activity of the stomach and intestine. Vop. kur., fizioter. i lech. fiz. kul't. 30 no.4:306-309 Jl-Ag '65. (MIRA 18:9)

L 34941-65 EWG(j)/EWG(f)/EWT(1)/FS(v)-3/EWG(v)/EWG(a)/EWG(c) Pa-5 DD

ACCESSION NR: AP5007353 S/0239/65/051/003/0372/0377

34
33
B

AUTHOR: Faytel'berg-Blank, V. R.

TITLE: The mechanism of changes in absorptive activity in the stomach and intestine during irradiation by UHF centimeter radio waves

SOURCE: Fiziologicheskiy zhurnal SSSR, v. 51, no. 3, 1965, 372-377

TOPIC TAGS: microwave, UHF, biological effect, gastrointestinal absorption, nervous system

ABSTRACT: The author studied how UHF influenced gastrointestinal absorption and the effect of the nervous system on this process when the epigastral region was irradiated. A total of 16 dogs, 6 with isolated stomach pouches (Pavlov method) and 10 with isolated small intestinal loops (Thiry method), were studied. Twenty rabbits were also used. In all, 910 tests were conducted on the dogs. Glucose was introduced into stomach pouches in a 20-mol% solution, and absorption was studied for 60 min. A 7-mol% glucose solution was introduced into intestinal loops for 30 min. A "Luch-58" generator was used to irradiate preparations with 12.6-cm waves (2307 mc). To study how skin and gastromucosal receptors participated in UHF-induced absorption processes, Novocain was used to deactivate them in a 0.5-mol% solution for skin receptors and a 2- and 5-mol% solution for gastromucosal receptors. Intestinal loops

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ACCESSION NR: AP5007353

were also denervated by means of resection of all visible nerves. To study the mechanism of vagus and sympathetic nerves in UHF-induced absorption processes, Novocain (0.25—0.5 mol%) was used to sublimate vagosympathetic trunks. To clarify the mechanism of the central nervous system in UHF responses, intervertebral ganglia were eliminated with a 0.5-mol% Novocain solution. The results of the experiment are shown in Figs. 1—4 of the Enclosure. It was demonstrated that the skin, stomach, and intestinal receptors played a large part in transmitting the effects of UHF to gastrointestinal absorption. When a portion of skin with receptors eliminated was irradiated with 70 v, absorption activity either did not change or increased slightly but to a much lesser degree than prior to the elimination of skin receptors. Elimination of gastrointestinal interoceptors significantly altered the effects of UHF on absorption. These data agree with other investigations which have established the role of interoceptors in maintaining the functional condition of various tissues and organs. The present study has shown that in addition to neural elements of the stomach and intestine, the splanchnic and vagosympathetic trunks and the external nervous system of the stomach and intestine play a significant role in the mechanism of the effect of microwaves on gastrointestinal absorption. However, since shifts in absorption were also observed in denervated intestinal loops, it is probable that humoral factors also play an important part. The data also showed that UHF altered

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L 34941-65
ACCESSION NR: AP5007353

cell respiration in gastrointestinal mucosa. This phenomenon may occur as a reflex function, or it may indicate the direct effect of microwaves on cells. Orig. art. has: 4 figures. [CD]

ASSOCIATION: Otdel fizioterapii Ukrainskogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii, Odessa (Physiology Department, Ukrainian Scientific Research Institute of Balneology and Physiotherapy)

SUBMITTED: 24Oct63 ENCL: 02 SUB CODE: LS, EC

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Card 3/5

L 34941-65

ACCESSION NR: AP5007353

ENCLOSURE: 01

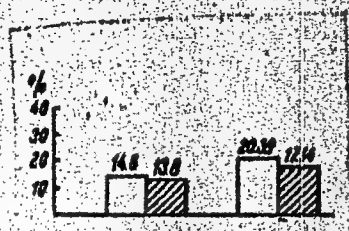

Fig. 1. Effect of UHF on glucose absorption in an isolated stomach during elimination of its interoceptors with a 5-mol% Novocain solution

White bar - absorption prior to UHF; striped bar - absorption during UHF; values above bars - percent of glucose absorption.

Fig. 2. Effect of UHF on glucose absorption in a denervated intestinal loop

White bar - normal absorption; striped bar - denervated absorption; black bar - absorption during UHF; values above bars - percent of absorption.

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L 34941-65

ACCESSION NR: AP5007353

ENCLOSURE: 02

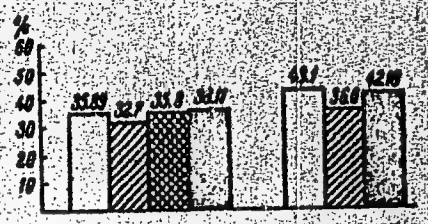

Fig. 3. Effect of UHF (70 v for 10 min) on intestinal glucose absorption with an epipleural blockade

White bar - normal absorption; striped bar - absorption during blockade; x'd bar - absorption prior to UHF; black bar - absorption during UHF.

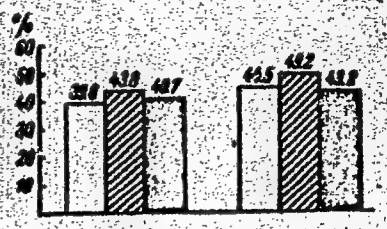

Fig. 4. Effect of UHF on glucose absorption in an intestinal loop where both splanchnic nerves have been resected

White bar - normal absorption; striped bar - absorption after resection; black bar - absorption during UHF.

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FAYTEL'BERG-BLANK, V.R.

Effect of high frequency physical agents on the absorption of radioactive phosphorus in the intestine. Fiziol. zhur. [Ukr.] 11 no.6:802-807 N-D '65. (MIRA 19:1)

1. Otdel fizioterapii Ukrainskogo nauchno-issledovatel'skogo instituta kurortologii i fizioterapii, Odessa. Submitted March 13, 1965.

Fay Tel'son, A. Sh.

14(5) PHASE I BOOK EXPLOITATION SOV/2818

Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki

Razvedochnaya i promyslovaya geofizika, vyp. XI. (Exploration and Industrial Geophysics, No. XI) Moscow, Gostoptekhizdat, 1958. 112 p. (Series: Sbornik proizvodstvennogo opyta) Errata slip inserted. 4,500 copies printed.

Ed.: A. I. Bogdanov; Exec. Ed.: E. P. Zobnyanin; Tech. Ed.: I. G. Rabotova.

PURPOSE: This booklet is intended for geophysical engineering and technical personnel in the petroleum industry.

COVERAGE: Individual articles of this collection discuss improvements in methods of interpreting seismic and gravimetric data, testing of seismic receivers, and the refinement of seismic station amplifiers. A nomogram is described for the rapid computation of magnetic properties of rock samples, and a summary is provided of experience in marking oil contacts. Improved methods and equipment of radiometric methods of surveying boreholes are also discussed. References accompany individual articles.

AVAILABLE: Library of Congress

Card 4/4

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FAYTEL'SON, A.Sh.

Comparing the results of geophysical prospecting carried out in the Aral Sea region. Razved. i pros. geofiz. no.21:76-81 '58. (MIRA 11:10)
(Aral Sea region--Prospecting--Geophysical methods)

FAYTEL'SON, A.Sh.

Using the results of gravitational prospecting in identifying fundamental paleostructural elements in the western part of the Soviet Baltic area. Razved. i prom. geofiz. no.36:45-57 '60. (MIRA 13:12)

(Baltic region--Geology, Structural)
(Prospecting--Geophysical methods)

FAYTEL'SON, A.Sh.

The Riga Pre-Devonian Depression. Dokl. AN SSSR 140 no.1:211-214 S-O '61. (MIRA 14:9)

1. Gosudarstvennaya soyuznaya spetsial'naya geofizicheskaya kontora "Spetsgeofizika". Predstavleno akademikom A.L.Yanshinym.
(Riga region--Geology, Structural)

FAYTEL'SON, A.Sh.

Crustal development and isostasy. Sov. geol. 6 no.11:3-13 N '63. (MIRA 17:1)

FAYTEL'SON, A.Sh.

Genetic classification of platform tectonic patterns and paleotectonic constructions according to the data of basement block structure. Sov. geol. 8 no.1:76-94 Ja '65.

(MIRA 18:3)

ACC NR: AP6035599 SOURCE CODE: UR/0387/66/000/010/0069/0

AUTHORS: Faytel'son, A. Sh.; Khazanova, P. B.; Petrova, M. M.

ORG: State Geological Committee SSSR, Office of Special Geophysical Exploration (Gosudarstvennyy geologicheskiy Komitet SSSR, Spetsgeofizika)

TITLE: Dependence of head-wave velocity on depth, and the structure of the upper parts of the crystalline basement (according to results of seismic and gravity field studies in the central and northwestern parts of the Russian platform)

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 10, 1966, 69-73

TOPIC TAGS: earth crust, earth gravity, seismic modeling

ABSTRACT: Seismic work on the central Russian platform and in the Baltic region in recent years has shown variations in head-wave velocities for different segments of the basement; these depend on rock densities (as revealed in size and sign of anomalies). Velocity data have been placed on a graph of velocity versus depth of basement, and comparisons have been made with curves, obtained from laboratory data, of velocity versus pressure, with depth indicated as a function of pressure. Pressure on basement rocks was computed according to the formula $P = \sigma H$, where σ is the density of the sedimentary layer, assumed to be 2.4 g/cm^3. Curves for two possible types of basement rocks were selected for comparison: granite and gabbro. The effect of refraction is less than previously assumed, probably because of temperature effects

Card 1/2 UDC: 550.834

ACC NR: AP6035599

Comparisons were also made with gravity profiles. Lowest velocities correspond to zones with lowest gravity values, and highest velocities correspond to greatest gravity values. Three models of basement structure are proposed: gradual lateral change from material of one density to another, a sharp break along a vertical boundary, and a sharp break along an inclined boundary. The authors conclude that the third model is best for the investigated region. Orig. art. has: 3 figures.

SUB CODE: 08/ SUBM DATE: 14Sep65/ ORIG REF: 004/ OTH REF: 001

Card 2/2

ACC NR: AP7013717

SOURCE CODE: UR/0215/66/000/012/0115/0118

AUTHOR: Faytel'son, A. Sh.

ORG: Spetsgeofizika

TITLE: New data on the geological structure of the central and northwestern regions of the Russian platform

SOURCE: Sovetskaya geologiya, no. 12, 1966, 115-118

TOPIC TAGS: tectonics, physical geology, map

SUB CODE: 08

ABSTRACT: The principal characteristics of the internal structure of the Precambrian crystalline basement of the central and northwestern parts of the Russian Platform are reflected in the gravity and magnetic anomalies. The strongest tectonic movements occurred in this region prior to the Middle Devonian; the principal features of the relief of the surface of the basement of the Devonian have still been preserved in its present relief. In the distribution of the thicknesses of the pre-Devonian deposits there is a dependence on the internal structure of the basement and on the motion of its individual blocks, whose outlines are clearly revealed by the gravity and magnetic anomalies. On the

Card 1/2

UDC: 551.1(470.2+470.3)

0933 2187

ACC NR: AP7013717

paleotectonic map accompanying this article the complex of pre-Devonian deposits is revealed from the gravity and magnetic data; the map shows the boundaries of the large blocks of the basement, lines of equal thicknesses and the principal tectonic elements. The article also is accompanied by a map of the principal elements of relief of the surface of the crystalline basement. The uplifted and subsided parts of the basement can be distinguished clearly on the basis of gravity anomalies. This can be attributed not so much to a change in the thickness of the above-lying sediments as to the different composition of the blocks of the basement. The movements of the blocks had a different sign, as can be seen, in particular, from a comparison of the pre-Devonian structural plan with the thicknesses of the above-lying deposits. There is a clear relationship between the density of the rocks of the blocks and the sign of the structural forms. The structural plan of the crystalline basement for the most part duplicates the structural plan of the pre-Devonian, confirming that in subsequent periods tectonic movements were relatively less expressed. Orig. art. has: 3 figures. [JPRS: 40,106]

Card 2/2

L 13481-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6002222 (A) SOURCE CODE: UR/0080/65/038/012/2848/2850

35
B

AUTHOR: Voronkov, M. G.; Faytel'son, F. D.

ORG: Institute of Organic Synthesis AN Latvian SSR (Institut organicheskogo sinteza AN Latviyskoy SSR)

TITLE: Low temperature setting of organosilicon resins, lacs and enamels

15,44,55

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 12, 1965, 2848-2850

TOPIC TAGS: organosilicon compound, silicon plastic, resin, plastic coating, secondary amine, INDUSTRIAL CATALYST

ABSTRACT: Two higher secondary amines $(n\text{-}C_4H_9)_2NH$ and $(n\text{-}C_5H_{11})_2NH$, were evaluated as catalysts for setting (hardening) silicoorganic resins, lacs, and enamels at 20°C. The object of the work was to compare low temperature catalytic setting of silicoorganic resins with high temperature (200°C) non-catalytic setting technique. Secondary amines in the amount of 0.2-0.6 wt % were added to commercial K-41, K-43, K-44, K-48 and K-54 silicoorganic resins containing such pigments as TiO_2 and SiC. The resins were sprayed onto a copper base. The setting period was in the 20-240 min range. It was found that aliphatic secondary

Card 1/2 UDC: 661.718.5

L 13481-66

ACC NR: AP6002222

0

amines containing 8 and 10 carbon atoms are suitable low temperature setting catalysts for silicoorganic resins as they do not cause gelation of lacs and enamels based on silicoorganic resins. The lacs and enamels prepared at 20°C by the use of amine catalysts exhibited mechanical and electrical properties and adhesion to the copper base comparable to those resulting from non-catalytic setting of silicoorganic resins at 200°C. It was found that lower amines do not possess catalytic properties for low temperature setting of silicoorganic resins. Orig. art. has: 1 table.

SUB CODE: 07,11/ SUBM DATE: 30Nov64/ ORIG REF: 003/ OTH REF: 002

DR

Card 2/2

1

Talcum as mold dressing. I. L. Faltel'son. *Liteinoe Proizvodstvo* 1952, No. 9, 29.—Plant experience showed that graphite can be successfully replaced with talc in all its foundry applications.

J. D. Gat

SOV/137-57-1-728

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 94 (USSR)

AUTHOR: Faytel'son, I. L.

TITLE: An Improved Mold-fabrication Technology for Housings of the Ninth Size Group of a Single Series (Ratsional'naya tekhnologiya formovki stanin 9-go gabarita yedinoy serii)

PERIODICAL: Inform.-tekhn. sb. M-vo elektrotekhn. prom-sti SSSR, 1956, Nr 9, pp 8-11

ABSTRACT: Description of the mold fabrication for housings for electrical machinery. The making of mold boxes and rods is done on machines of the "German-3000" type. The rod is used in the green state. This technology yields top-quality castings and elevated output.

I. B.

Card 1/1

FAYTEL'SON, I.L., inzhener.

Machine molding of frames of the thirteenth bulk category using green cores. Vest.elektroprom. 27 no.5:48-52 My '56. (MLRA 9:12)

1. Zavod imeni M.I. Kalinina Ministerstva elektricheskoy promyshlennosti.
(Electric machinery industry)
(Molding (Founding))

ADAMESKU, R.A.; KUDRYAVTSEV, I.P. [deceased]; FAYTEL'SON, L.M.; GEL'D, P.V.

Characteristics of texture formation during the cold rolling of silicon iron with low and medium degrees of deformation. Izv. vys. ucheb. zav.; chern. met. 8 no.10:106-109 '65. (MIRA 18:9)

1. Ural'skiy politekhnicheskiy institut.

FAYTEL'SON, L. (Riga); KAZAKS, K. (Riga)

Determination of the molding properties of concrete mixtures. In Russian. Vestis Latv ak no.5:55-60 '60. (EEAI 10:7)

1. Akademiya nauk Latviyskoy SSR, Institut stroitel'stva i arkhitektury.
(Concrete)

FAYTEL'SON, L. (Riga)

Concerning the concrete vibromixing mechanism. Vestis Latv ak no.6: 47-50 '60.

(EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut stroitel'stva i arkhitektury.

(Vibrated concrete)

FAYTEL'SON, L. A.

Cand Tech Sci - (diss) "Vibro-mixing of concrete mixtures." Moscow, 1961. 17 pp; with diagrams; (Academy of Construction and Architecture USSR, Scientific Research Inst of Concrete and Reinforced Concrete "NIIZhB");300 copies; price not given; list of author's works at text's end (10 entries); (KL, 7-61 sup, 247)

FAYTEL'SON, L.A., inzh.

Effect of vibration mixing on properties of the concrete mix. Trudy NIIZHB no.21:49-58 '61. (MIRA 14:12)

1. Institut stroitel'stva i arkhitektury AN Latviyskoy SSR.
(Vibrated concrete)

FAYTEL'SON, L.A., inzh.

Determination of the rheological properties of a concrete mix.
Trudy NIIZHB no.21:286-291 '61. (MIRA 14:12)

1. Institut stroitel'stva i arkhitektury AN Latviyskoy SSR.
(Precast concrete)

FAYTEL'SON, Lev Aronovich; VENGRANOVICH, A., red.; BITAR, A., tekhn. red.

[Compaction of concrete in molds] Uplotnenie betona v kassetnykh formakh. Riga, Izd-vo Akad. nauk Latviiskoi SSR, 1962. 17 p. (MIRA 15:6)

(Vibrated concrete)

DESOV, A.Ye., doktor tekhn.nauk; KOROLEV, K.M., kand.tekhn.nauk; MALINOVSKIY, A.G., inzh.; FAYTEL'SON, L.A., kand.tekhn.nauk

Results of testing vibromixing machinery. Trudy NIIZHB no.33:41-63 '64. (MIRA 18:2)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona Gosstroya (for Desov, Korolev, Malinovskiy). 2. Institut stroitel'stva i arkhitektury AN Lativiyskoy SSR (for Faytel'son).

FAYTEL'SON, L.A., kand.tekhn.nauk; LINARTS, P.P., inzh.; BRIYEDIS, I.P., inzh.

Vertical molding of precast reinforced concrete elements by the vibratory piston method. Trudy NIIZHB no.33:292-333 '64.
(MIRA 18:2)

FAYTEL'SON, Lev Aronovich; LINARTS, P.; BRIEDIS, I ; SHUL'TS, I., red.

[Experience in the vibropiston molding of prefabricated reinforced concrete constructions] Opyt vibroporshnevogo formovaniia sbornykh zhelezobetonnykh konstruktsii. Riga, Izd-vo AN Latviiskoi SSR, 1965. 84 p.
(MIRA 18:7)

L 20412-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM

ACC NR: AP6008408 (A) SOURCE CODE: UR/0374/66/000/001/0130/0138

AUTHOR: Briyedis, I. P.; Faytel'son, L. A.

54
B

ORG: Institute of Mechanics of Polymers, Academy of Sciences, Latvian SSR, Riga (Institut mekhaniki polimerov Akademii nauk Latviyskoy SSR)

TITLE: Calculation of inertia in a dynamic measurement of rheological characteristics of polymers

SOURCE: Mekhanika polimerov, no. 1, 1966, 130-138

TOPIC TAGS: polymer, polymer structure, shear modulus, vibration propagation, critical wavelength, impact toughness, polymer rheology

ABSTRACT: The evaluation of dynamic shear modulus and impact toughness in polymer materials by means of the Fitzgerald-Ferry apparatus is given. Limit heights of samples are obtained for which the wave character of the propagation of vibrations may be neglected. Agreement of the values of rheological constants which were obtained with and without account for inertia is observed at ratios of heights of specimens to wavelengths below 0.02—0.05. Above this limit, discrepancy grows rapidly and attains magnitudes to which the recommended formulas (J. D. Ferry, Vyazkouprugiye svoystva polimerov. M. 1963; E. R. Fitzgerald, J. D. Ferry, Coll. Sci., 1953, 1; G. V. Vinogradov, Yu. G. Yanovskiy, Zav. lab., 1965, 1; Yu. G. Yanovskiy, G. V. Vinogradov, Mekh. polim. 1965, 4, 106) are inapplicable. Depend-

Card 1/2 UDC: 678:534.641

L 20412-66

ACC NR: AP6008408

ences for the determination of rheological constants with due account for inertia of the sample are given. Orig. art. has: 6 figures and 29 formulas. [Based on authors' abstract.]

[NT]

SUB CODE:11,20/ SUBM DATE: 01Jul65/ ORIG REF: 004/ OTH REF: 001/

Card 2/2

ROZENSHTRAUKH, L.S., doktor meditsinskikh nauk; FAYTEL'SON, L.D.

Device for double contrast in roentgenological examination of the stomach. Vest.rent.i rad. 36 no.3:54-55 My-Je '61. (MIRA 14:7)

1. Iz 2-y kafedry rentgenologii i radiologii (zav. - prof. Yu.N. Sokolov) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. M.D.Kovrigina).
(STOMACH--RADIOGRAPHY)

MAYTEL'SON, S.Kh., inzhener.

Precast reinforced concrete frames for window openings. Biul. stroi. tekh. 13 no.9:10-12 S '56. (MLRA 9:11)

1. Stroytrest no.94, gorod Vladimir.
(Windows)

FAYTEL'SON, S.Kh., inzhener.

Making brick blocks in construction yards. Stroi.prom. 34 no.1: 37-38 Ja '56. (MLRA 9:5)

(Building blocks)

MAYTEL'SON, S. Kh.

LIMONOV, S.P., inzhener; MAYTEL'SON, S.Kh., inzhener; MIELEV, N.P., kandidat tekhnicheskikh nauk, nauchnyy redaktor; YUDINA, L.A., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiy redaktor.

[Apartement houses made of large brick blocks; construction practices in Vladimir] Zhilee zdanie iz krupnykh kirpichnykh blokov; iz opyta stroitel'stva vo Vladimire. Moskva, Gos.izd-vo lit-ry po stroit. i arkhit. 1957. 34 p. (MIRA 10:6)

(Vladimir--Apartment houses)
(Bricklaying)

Faytel'son, S.Kh.

LIMONOV, S.P., inzhener; FAYTEL'SON, S.Kh., inzhener.

Apartment house construction using large brick blocks. Nov.tekh. i pered.op. v stroi. 19 no.3:12 Mr '57. (MLRA 10:4)
(Apartment houses) (Building blocks)

FAYTEL'SON, S.Kh., insh.

Building components made of sawdust. Der. prom. 7 no.10:21-22 O '58. (MIRA 11:11)
(Hardboard) (Wood waste)

FAYTEL'SON, S., inzh.

All-purpose traverse. Stroitel' no.1:13 Ja '59. (MIRA 12:3)
(Cranes, derricks, etc.)

FAYTEL'SON, A.Sh.

Temperature effect calculations in surveying with the GAK-3M type gravimeters. Razved.i prom.geofiz. no.33:48-58 '59. (MIRA 13:4)

(Gravimeter (Geophysical instrument))

FAYTEL'SON, V.M., starshiy prepodavatel'

Some antiMarxist concepts of freedom in the German Federal Republic. Report No.5. Sbor. trud. Kursk. gos. med. inst. no.16:22-30 '62. (MIRA 17:9)

1. Iz kafedry marksizma-leninizma Kurskogo gosudarstvennogo meditsinskogo instituta (zav. - dotsent G.K. Lunev) i Instituta povysheniya kvalifikatsii prepodavateley obshchestvennykh nauk pri Moskovskom gosudarstvennom universitete (nauchnyy rukovoditel' - dotsent A.K. Kurylev).

FAYTEL'SON, V.M., starshiy prepodavatel'

Some antiMarxist concepts of freedom in the German Federal Republic. Report No.6. Sbor trud. Kursk. gos. med. inst. no.16:31-38 '62. (MIRA 17:9)

1. Iz kafedry marksizma-lenizma Kurskogo gosudarstvennogo meditsinskogo instituta (zav. - dotsent G.K. Lunev) i Instituta povysheniya kvalifikatsii prepodavateley obshchestvennykh nauk pri Moskovskom gosudarstvennom universitete (nauchnyy rukovoditel' - dotsent A.K.Kurylev).

FAYTEL'SON, V.S.

Ca

21

Quality of Intinsk coal and means for its beneficiation. M. G. Akopov and V. S. Faitel'son. *Ekon. Toplivo, Za* 4, No. 1/2, 3-7(1947).—Coal from the Intinsk deposit is rich in ash, moisture, and S and is difficult to beneficiate. Two flow sheets were worked out for treating this coal. One of these is based on wet gigging and the other on pneumatic sepn. The fines are washed on screens retaining + 200 mesh. The 2 methods yield 68 and 67% of feed, resp., with an ash content, dry basis, of 17.5 and 18.0%, resp. The fines can be briquetted. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

FAYTEYEV, A.A.

Water cooling of a rotary fritting furnace. Stek. i ker. 13 no.9:30 S '56. (MLRA 9:10)

(Smolensk--Glass manufacture)

18 (7)

AUTHORS: Kiseleva, S. A., Fayvilevich, G. A. SOV/32-25-5-16/56

TITLE: Use of Color Metallography for the Investigation of Iron-chrome Alloys (Primeneniye tsvetnoy metallografii k issledovaniyu zhelezokhromistykh splavov)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 5, pp 570-571 (USSR)

ABSTRACT: The present paper describes the use of color pickling for the investigation of structural transformation processes in the thermal treatment of binary iron chrome alloys (39.15 % Cr and 0.035 % C). L. G. Apolovnikova carried out the chemical pickling mainly in aqueous solutions (4 g $KMnO_4$, 4 g Na_2O_2 on 100 ml of water) at 90° and a duration of 2-3 minutes. The color photographs of the microstructure were prepared by Yu. I. Smirnov. The best results were obtained when prior to chemical pickling an electrolytic pickling (in 10 g CrO_3 on 100 ml of water or 1 g picric acid, 5 ml hydrochloric acid and 95 ml ethanol) took place. The coloring reagent may be supplied by a boiling solution consisting of: 10 g $K_3Fe(CN)_6$, 10 g KOH, 100 ml of water or 30 g $K_3Fe(CN)_6$, 30 g KOH and 100 ml of

Card 1/2

Use of Color Metallography for the Investigation of Iron-chrome Alloys SOV/32-25-5-16/56

water (Ref 3). A special arrangement (Fig 1) was devised for the hot pickling of the samples, making it possible to carry out heating in vacuum followed by an oxidation of the polished microsection surface at atmospheric pressure. The apparatus features a diffusion pump TsVL-100, a rotating oil pump VP-461, a monometer container LT-2 and MM-2 and a vacuum meter VIT-1. A few color photographs of different pickled microsections are shown (Figs 2-5). Depending on the mode of pickling the individual metal phases are differently colored. Pickling with alkaline ferrocyanide shows that the separation of the σ-phase is concentrated all around the carbide particles. Proportionally to the annealing duration also a partial penetration of the σ-phase into the grain bodies was observed. The work under review was carried out under the advice of A. N. Chervyakov. There are 5 figures and 2 references, 1 of which is Soviet.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy)

Card 2/2

KISELEVA, Sof'ya Aleksandrovna; FAYVILEVICH, Galina Aminondovna; BERLIN, Ye.N., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.; NVENSON, I.M., tekhn.red.

[Metallography of nonferrous metals] TSvetnaia metallografiia. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1960. 109 p. (MIRA 14:1)

(Nonferrous metals--Metallography)

VINOGRAD, M.I.; KISELEVA, S.A.; SMIRNOVA, A.V.; KRASNOVA, A.K.;
FAYVILEVICH, G.A.; PAVPEROVA, I.A.; SMIRNOV, Yu.I.

"Metallography laboratory" by E.V.Panchenko and others. Reviewed by M.I.Vinograd and others. Zav.lab. 26 no.1:127-128 '60. (MIRA 13:5)

(Metallography)

S/126/61/012/002/017/019
E073/E535

AUTHORS: Ravdel', M.P. and Fayvilevich, G. A.

TITLE: Polygonization in manganese-base alloys

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol.12, No.2, pp.294-296

TEXT: The authors studied the microstructure of the Mn-Cu-Ni alloy containing 67% Mn, 20% Ni, rest copper. At room temperature alloys of this type have a "block" microstructure which can be revealed by means of ordinary chemical etching in a 3% aqueous solution of hydrochloric acid. R. S. Dean et al. (Ref.1: TASM, 1945, 34, 443) attributed this structure to the effect of grinding and polishing. To elucidate the problem as to whether this block structure characterizes a high temperature solid solution or whether it is formed during the cooling process, investigations were carried out during the process of heating to 800°C and subsequent cooling to room temperature. The microstructure was investigated in vacuo on unetched polished sections after electrolytic polishing and in a pure hydrogen atmosphere. Neither in vacuo nor in hydrogen did thermal etching reveal a block

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structure. At 400 to 500°C grain boundaries were revealed, which remained unchanged during the further process of heating. At 800°C an instantaneous breaking up of the original grains occurred and a structure formed, a microphotograph of which is reproduced in the paper. Cooling did not result in great changes in structure; the initial grains were broken up into fragments of 5-10 μ and the boundaries of these fragments represent regular rows of etching points distributed at certain intervals. The particular breaking up of the grains observed during the process of heating may be associated with polygonization - formation of ordered systems of dislocations as a result of their displacement in the crystal lattice during the process of heating. Similar structures were observed (for preliminary deformation and annealing) in Fe-Al alloys by B. V. Molotilov (Ref.4: FMM, 1959, 8, 3, 463) and in Fe-Si alloys by C. Dunn and W. Hubbard (Ref.5: Acta met., 1955, 3, 409; 1956, 4, 307) and in aluminium by P. Lacombe, L. Beaujard and R. W. Cahn (Ref.6: J.Inst. Met., 1948, 74, 1; 1949, 76, 121). These structures were revealed by ordinary chemical etching at room temperature. In the Mn-Cu-Ni alloy only thermal etching enabled,

Polygonization in manganese-base alloys S/126/61/012/002/017/019
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for the first time direct observation of grain refining during heating to 800°C of a preliminarily quenched alloy. In manganese alloys this can be associated with the anomalously high coefficient of thermal expansion and the development during heating of large thermal stresses which result in plastic deformations (illustrated in the case of impulse heating by slip lines in a microphotograph, which is reproduced in the paper). The block structure revealed by ordinary chemical etching did not permit observation of polygon boundaries. The block structure, which so far has been revealed by chemical etching only in solid solutions with a face-centered cubic lattice, is attributed to dislocations. Similar structures were theoretically predicted for metals with a face-centered cubic lattice by T. Sudzuki and T. Imura (Ref.7: Problems of Modern Physics, 1957, 9, 80) and observed experimentally in chemically etched Al-Mn alloys. The authors explain the nature of such a substructure by a regular distribution of dislocations. In Mn-Cu-Ni alloys the disappearance of the block boundaries during decomposition is accompanied by the appearance of a large number of chaotic-alloy distributed etching pits, which may be the result of

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Polygonization in manganese-base alloys S/126/61/012/002/017/019
E073/E535

individual dislocations which previously were regularly distributed at the block boundaries. There are 4 figures and 7 references: 3 Soviet and 4 non-Soviet.

ASSOCIATION: Institut pretsizionnykh splavov TsNIIChM (Institute of Precision Alloys TsNIIChM)

SUBMITTED: November 25, 1960

Card 4/4

SMIRNOVA, A.V.; FAYVILEVICH, G.A.; PANFILOVA, E.V.

Using methods of electron microscopy and color metallography to investigate the structure of chromium-nickel-molybdenum steel. Sbor. trud. TSNIICHM no.24:246-253 '62. (MIRA 15:6)
(Chromium-nickel steel--Metallography) (Electron microscopy)

FAYVILEVICH, G.A.; KOKORIN, G.A.; YAKOVLEVA, Ye.D.; SMIRNOV, Yu.I.

Using methods of color metallography for the analysis of certain carbides and intermetallic compounds. Sbor. trud. TSNIICHM no.24:284-300 '62. (MIRA 15:6)
(Alloys--Metallography) (Intermetallic compounds)

S/032/62/028/007/002/011
B104/B102

AUTHORS: Smirnova, A. V., Fayvilevich, G. A., and Panfilova, E. V.

TITLE: Combined use of electron microscopy, color metallography, and magnetic metallography for structural analyses of high-alloy steels

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 7, 1962, 817 - 818

TEXT: Valve steel (0.42% C, 0.48% Si, 1.1% Mn, 20.57% Cr, 4.74% Ni, 2.43% Mo) hardened at 1000, 1050, and 1125°C and subsequently aged at 800°C for 10 hrs was subjected to phase analysis by electron microscopy, color metallography, and magnetic metallography. Phase analysis could not be carried out with an optical microscope. Magnetometallographic examination revealed a magnetic (δ-ferrite) phase and a non-magnetic (austenite) phase. Electron diffraction studies showed that the carbides established by etching with ferrocyanide had the composition $Me_{23}C_6$ with a lattice parameter a = 10.5 Å. The electron microscope revealed particles with a size of 0.1μ at the grain boundaries of the hardened

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steel. The growth of these particles after aging and their distribution were investigated. They were subjected to thermal etching and identified as the σ-phase. During the aging process the austenite decomposes according to the kinetics of martensite. There are 2 figures.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin)

FAYVILEVICH, G.A.; RAVDEL', M.P.

Applying high-temperature metallography to the investigation of manganese-base alloys. Sbor. trud. TSNIICHM no.24:204-224 '62. (MIRA 15:6)

(Manganese alloys--Metallography)
(Metals, Effect of temperature on)

L 15666-63 EWP(q)/EWT(m)/BDS AFFTC/ASD Pad HD/HM/HW
ACCESSION NR: AP3004234 S/0032/63/029/007/0814/0815

65
57

AUTHOR: Fayvilevich, O. A.

TITLE: Exposure of chemical nonhomogeneity of structural components in alloys by heat etching

SOURCE: Zavodskaya laboratoriya, v. 29, no. 7, 1963, 814-815 and pp.3-4 of insert following p. 816

TOPIC TAGS: alloy, nonhomogeneity, heat etching, eutectic alloy, eutectoid, soft solder, austenite

ABSTRACT: In the present work the technique of heat etching was conducted by heating the samples in soft solder and in vacuum, resulting in the oxidation of the polished microcut surface by atmospheric oxygen. The classification of the separate components was conducted by means of electrochemical, X-ray, and electronographic methods of phase analysis. In the cast alloy EI847 the austenite was dyed yellow and orange-brown. Blue, elongated carbonitrides of niobium and a white alpha phase were located in the light-colored sections. In the Magniko-type alloy a similar picture was obtained, and it was found that in the

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yellow austenite sections the hardness was 280-261 and 273-261, while that of the orange-brown sections amounted to 218-205 and 218-201. In the nickel-aluminum alloy, containing 21.6% Al, minute particles of strongly oriented Ni_3Al phase are separated (after quenching at 1250C and 1000 hours aging at 850C). The coloration of these phases is dual. The brown field is gradually being filled with little blue squares. Phase Ni_3Al becomes stained into a uniform blue color only after aging for 2000 hours. In the iron-molybdenum alloy, containing 29.92% Mo, there should be present at equilibrium a Fe_7Mo_6 phase, and the etching technique actually brought out in such a cast alloy a dual coloration of an intercrystal. N. A. Vilochkin, L. A. Nikitina, and Yu. I. Smirnov participated in the work. Orig. art. has: 7 figures (6 in color).

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. I. P. Bardina (Central Scientific Research Institute of Ferrous Metallurgy)

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BULAT, N.L.; KOROTKOV, V.F.; FAYVILEVICH, G.A.; ZHURENKOV, P.M.

Microspectral analysis. Sbor.trud. TSNIICHM no.31:34-40 '63. (MIRA 16:7)

(Steel--Metallography) (Steel--Spectra)

KOROLEV, N.V.; FAYVILEVICH, G.A.; GROMOVA, G.P.; LEBEDEVA, S.B.

Investigating nonmetallic inclusions by the microspectral method. Sbor. trud. TSNIICHM no.32:138-141 '63. (MIRA 16:12)

KOROLEV, N.V.; FATVILEVICH, G.A.

Microspectral method of studying nonmetallic inclusions.
Zav. lab. 30 no.5:557-558 '64. (MIRA 17:5)

FAYVILEVICH, G.A.; SMIRNOV, Yu.I.; KOLINE, S.S.

High-temperature metallography with motion-picture photography. Sbor. trud. TSNIICHM no.38:16-21 '64. (MIRA 18:3)

EPA(6)-2/EPR/EWT(m)/EPA(bb)-2/EWP(b)/T EWA(h) EWP(t) Pe-4/
IJP(c) JD/HW

ACCESSION NR: AT5003401 S/2776/64/000/038/0085/0094

AUTHOR: Fayvilevich, G. A.; Gerasimenko, A. A.; Lebedeva, S. B.

[illegible] metallic inclusions in the alloys of the Fe-Ni-Al system used for per-[illegible]

[illegible] Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metal-[illegible] sbornik trudov, no. 38, 1964. Novyye metody issledovaniya metallov, metal-[illegible] issledovaniya i mekhanicheskikh [illegible] (New methods [illegible] metals, metallographic investigations and analyses of metals), 86-94

TOPIC TAGS: acid crucible, basic crucible, Magnico, deformability, nonmetallic inclusion, alloy magnetic property, corundum, aluminosilicate glass, magnet

ABSTRACT: A comparison of two types of crucibles and their effect on non-metallic inclusions in Magnico (24% Co, 14% Ni, 8.5% Al, 3% Cu, balance Fe) showed the advantages of a basic crucible over an acid crucible. The charge melted in an acid quartzite crucible was composed of crushed glass, Fe and Ni with Co and Cu additives. Metallographic examination revealed inclusions consisting of films of a special type of aluminosilicate glass and corundum crystal particles. Specimens

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produced in a basic magnesite crucible under conditions of diffusive deoxidation and with synthetic slag contained a substantially smaller number of inclusions, consisting primarily of small corundum accumulations or individual corundum articles. Metal porosity was considerably lower while the soundness of the casting was much higher. The rolling of a cast Magnico sheet bar proved that it had satisfactory plasticity. Furthermore, the effect of the basic crucible was also beneficial with regard to residual induction and magnetic energy. Orig. art. has: 14 figures and 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Moscow (Central ferrous metallurgy scientific research institute)

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